# THE IDENTITY OF TWO UNPLACED NEW WORLD MEGASTIGMINAE (HYMENOPTERA: TORYMIDAE)

E. E. GRISSELL AND S. L. HEYDON

(EEG) Systematic Entomology Laboratory, PSI, Agricultural Research Service, U.S. Department of Agriculture, % National Museum of Natural History, Washington, DC 20560-0168, U.S.A. (e-mail: egrissell@sel.barc.usda.gov); (SLH) Bohart Museum, Department of Entomology, University of California, Davis, CA 95616, U.S.A.

Abstract.—Two previously unplaced taxa of Torymidae are recognized. Megastignus mendocinus Kieffer and Jörgensen 1910 is transferred to the genus Torymoides (Torymidae), **new combination**, and is placed as a **new junior subjective synonym** of Torymoides sulcius (Walker), one of the most widespread torymid parasitoids of Cecidomyiidae in the New World. Megastignus flavipes Ashmead 1886 is transferred to the genus Gastrancistrus (Pteromalidae), **new combination**, and Gastrancistrus biguttatus (Girault) 1917 is placed as a **new junior subjective synonym** of Gastrancistrus flavipes (Ashmead).

Key Words: Megastigmus mendocinus, Torymoides mendocinus, Megastigmus flavipes, Gastrancistrus flavipes, new synonymy

In the course of preparing a world catalog for the subfamily Megastigminae the senior author discovered two species of Megastigmus that have eluded positive recognition since their description. Megastigmus mendocinus Kieffer and Jörgensen (1910) is the only species (of 168) reported from South America; its type material has never been located. Megastigmus flavipes Ashmead (1886) is known only from the holotype, which was fragmented sometime after its description, and all that now remains is a single forewing, a hindleg, and the tibia from another leg. The purpose of this paper is to confirm the identity and correct nomenclature for these two taxa, the latter of which is transferred to the family Pteromalidae.

### TORYMIDAE

## Torymoides sulcius (Walker)

Callimome sulcius Walker 1839: 64. Holotype female BMNH, examined.

- *Callimome caburus* Walker 1839: 63–64. Holotype male BMNH, examined.
- Megastigma cecidomyiae Ashmead 1887: 185–186. Lectotype female USNM, examined.
- *Lochites auriceps* Ashmead 1894: 153. 2 syntype females USNM, examined.
- *Torymus ventralis* Howard 1897: 135. 2 syntype males BMNH (1 syntype), USNM (1 syntype), both examined.
- *Torymus howardii* Dalla Torre 1898: 307. Objective replacement name for *Torymus ventralis* Howard 1897: 135 *nec* Fonscolombe 1832: 286.
- Megastigmus fulvus Cameron 1904: 58. Holotype female BMNH, examined.
- Megastigmus mendocinus Kieffer and Jörgensen 1910: 410. Female syntypes lost. New Synonymy.

*Megastigmus mendocinus* Kieffer and Jörgensen is the only species of the genus reported from South America. It was collected in Cordillera de Mendoza, Provincia Mendoza, Argentina. No one has been able to locate the type material of Kieffer and Jörgensen (De Santis, personal communication, Gagné 1994) so that judgment about most of their species must be based on original descriptions and an examination of host information, both of which are remarkably good (Grissell 1995). The species was described based on specimens reared from a cecidomyiid gall, Oligotrophus lyciicola Kieffer and Jörgensen. Only four of 168 species of Megastigminae are positively associated with Diptera, and of these, only two are known as parasitoids of Cecidomyiidae (Grissell, in press). Therefore the host association alone casts some suspicion on the placement of mendocinus in Megastigmus.

Within the subfamily Megastigminae, the only species known from South America is *mendocinus*. In the New World *Megastigmus albifrons* Walker is known to occur as far south as Guatemala, all other species being confined to the Nearctic Region. Thus, distribution of known species also argues against the current generic placement.

Kieffer and Jörgensen described the female of mendocinus as 1.8 mm in length, which is exceptionally small for species of Megastigmus. The body was described as yellow-red, with parts of the thorax metallic green and the dorsum of the abdomen brownish. The stigma was described as being circular. This description readily fits the torymid Torymoides sulcius (Walker 1839), which also happens to be the most commonly collected, widespread Neotropical torymid parasitoid associated with cecidomyiids. It might be assumed, based on the otherwise comprehensive and lengthy paper of Kieffer and Jörgensen, that they would, by chance, have described the most common species. In this case we believe they called it M. mendocinus. One synonym of Torymoides sulcius is Megastigmus cecidomviae Ashmead (1887), a further indication that some species in the two genera might be confused based on the somewhat enlarged stigma of the forewing in *T. sul*cius.

For the above reasons, we place *Mega-stigmus mendocinus* Kieffer and Jörgensen as a junior subjective synonym of *Tory-moides sulcius* (Walker). The remaining synonyms listed above were explained in Grissell (1995).

The known distribution of this species now encompasses Florida and Texas (Peck 1951) south to Mexico, Grenada, St. Vincent, St. Kitts, Montserrat, Nicaragua, Peru, Argentina, and Brazil (De Santis 1978, 1979).

#### PTEROMALIDAE

# Gastrancistrus flavipes (Ashmead), new combination

- Megastigmus flavipes Ashmead 1886: 128 (nec Ashmead 1888). Holotype male, Florida USNM, examined.
- Miscogaster biguttata Girault 1917: 97. 4 male syntypes, [Florida] USNM, examined. New synonymy.

*Megastignus flavipes* was discussed by Milliron (1949) who placed it as an unrecognized species in his revision of Nearctic species. Even in 1949 all that remained of the single known specimen (the holotype) was a wing and hind leg. Milliron (1949) commented that, based on the original description, the species might not be a *Megastignus*, but based on the distinctive stigmal vein it might be a megastigmine torymid.

The stigmal vein of *M. flavipes* is enlarged and distinctive enough so that when initially examined by the senior author, it was apparent that the species might be placed in the pteromalid genus *Gastrancistrus*. The junior author has been working on a revision of that genus, and based on the type locality (Jacksonville, Florida) and enlarged stigma, the fragmentary wing and leg was readily associated with a series of specimens of *Gastrancistrus* described from that same locality by Girault (1917). The pale tibia and the restriction of the darker coloration on the wing to the stigmal

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vein and its immediate vicinity is the same as that found in *Miscogaster biguttata* Girault, which was transferred to *Gastrancistrus* by Heydon and Bouček (1992: 476). *Gastrancistrus biguttatus* (Girault) is the earlier name and is here placed as a junior subjective synonym of *flavipes* (Ashmead) which is transferred from *Megastigmus* as a new combination in the genus *Gastrancistrus*.

#### LITERATURE CITED

- Ashmead, W. H. 1886. Studies on the North American Chalcididae, with descriptions of new species from Florida. Transactions of the American Entomological Society 13: 125–135.
  - —. 1887. Studies on the North American Chalcididae, with descriptions of new species, chiefly from Florida. Transactions of the American Entomological Society 14: 183–203.
  - —. 1888. Descriptions of some unknown parasitic Hymenoptera in the collection of the Kansas State Agricultural College, received from Prof. E. A. Popenoe. Bulletin of the Kansas State Agricultural College 3: i–viii.
  - —. 1894. Report on the parasitic Cynipidae, part of the Braconidae, the Braconidae, the Ichneumonidae, the Proctotrypidae, and part of the Chalcididae.—Part II. Journal of the Linnean Society of London Zoology 25: 108–188.
- Cameron, P. 1904. New Hymenoptera, mostly from Nicaragua. Invertebrata Pacifica 1: 46–69.
- Dalla Torre, C. G. de 1898. Catalogus Hymenopterorum hueusque descriptorum systematicus. V. Chalcididae et Proctotrupidae. Leipzig, 598 pp.
- De Santis, L. 1978. Nuevas citas de himenopterous chalcidoideos para la Republica Argentina (Insecta). Neotropica 24: 2.

—. 1979. Catálogo de los Himenópteros Chalcidoideos de América al sur de los Estados Unidos. La Plata: Comisión Investigaciones Científicas de la Provincia de Buenos Aires, Publicación Especial, 488 pp.

- Fonscolombe, E. L. J. 1832. Monographia Chalciditum Galloprovinciae circa Aquas Sextias degentium. Annales des Sciences Naturelles Zoologie et Biologie Animale 26: 273–307.
- Gagné, R. J. 1994. The gall midges of the Neotropical Region. Ithaca, NY: Cornell University Press, 352 pp.
- Girault, A. A. 1917. New miscellaneous chalcid-flies from North America. Psyche 24: 91–99.
- Grissell, E. E. 1995. Toryminae (Hymenoptera: Chalcidoidea: Toryminae): A redefinition, generic classification, and annotated world catalog of species. Memoirs on Entomology, International 2: 1–470.
  In press. An annotated catalog of world Megastigminae (Hymenoptera: Torymidae). Contri-
- butions of the American Entomological Institute. Heydon, S. L. and Z. Bouček. 1992. Taxonomic chang-
- es in Nearctic Pteromalidae, with the description of some new taxa (Hymenoptera: Chalcidoidea). Proceedings of the Entomological Society of Washington 94: 471–489.
- Howard, L. O. 1897. On the Chalcididae of the island of Grenada, B.W.I. Journal of the Linnean Society of London Zoology 26: 129–178. (Journal dated 1896.)
- Kieffer, J. J. and P. Jörgensen. 1910. Gallen und Gallentiere aus Argentinien. Zentralblatt fur Bakteriologie, Parasitendunde und Infektionskrankheiten Abt. 2 27: 362–444.
- Milliron, H. E. 1949. Taxonomic and biological investigations in the genus *Megastigmus* with particular reference to the taxonomy of the Nearctic species (Hymenoptera: Chalcidoidea: Callimomidae). American Midland Naturalist 41: 257–420.
- Peck, O. 1951. Chalcidoidea, pp. 410–594. In Muesebeck, C. F. W., K. V. Krombein, and H. K. Townes, eds., Hymenoptera of America North of Mexico. United States Department of Agriculture, Agriculture Monograph No. 2, Washington, D.C. U.S. Government Printing Office, 1420 pp.
- Walker, F. 1839. Monographia Chalciditum, 2. London: Hyppolite Bailliere, 100 pp.